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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,245	11/18/2003	Makoto Izawa	10973-111001 / K43-160304	6738
26211	7590	11/29/2005	EXAMINER	
FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			REHM, ADAM C	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/716,245

Applicant(s)

IZAWA, MAKOTO

Examiner

Adam C. Rehm

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been received.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over POIRIER D'ANGE D'ORSAY (US 4,204,270).
3. Regarding Claim 1, POIRIER D'ANGE D'ORSAY provides a vehicle posture detecting means for detecting the change in the posture of the vehicle (C1 and C2, Column 4, Lines 29-33); irradiation control means for calculating a pitch angle indicative of a vertical inclined posture in a forward direction of the vehicle based on information detected by the vehicle posture detecting means and computing a control amount for correcting an optical axis of irradiation related to the headlamp for the vehicle, and setting a ground angle of the optical axis of the irradiation in a deceleration of the vehicle to be smaller than a ground reference angle of the optical axis of the irradiation during stop or constant speed running of the vehicle, thereby carrying out a correcting calculation for maintaining a forward visible distance of the vehicle to be constant (Column 4, Lines 38-65); driving means for changing a direction of the optical axis of the

irradiation of the headlamp for the vehicle upon receipt of a control command sent from the irradiation control means (Column 4, Lines 38-65); a ground reference angle of the optical axis of the irradiation (α , Fig. 1), a ground clearance of the headlamp for the vehicle (Fig. 1) and a forward visible distance of the vehicle (L, Fig. 1).

4. Regarding Claim 3, D'ORSAY provides a running state detecting means for detecting a running state of the vehicle, wherein when an acceleration in a deceleration of the vehicle is detected by the running state detecting means, the irradiation control means adds a correction amount which is proportional to an absolute value of the acceleration to a control amount determined by the pitch angle (C1 and C2, Column 4, Lines 29-33).

5. Regarding Claim 4, D'ORSAY provides a vehicle posture detecting means for detecting the change in the posture of the vehicle (C1 and C2, Column 4, Lines 29-33); irradiation control means for calculating a pitch angle indicative of a vertical inclined posture in a direction of advance of the vehicle based on information detected by the vehicle posture detecting means and computing a control amount for correcting an optical axis of irradiation related to the headlamp for the vehicle, and setting a ground angle of the optical axis of the irradiation in an acceleration of the vehicle to be greater than a ground reference angle of the optical axis of the irradiation during stop or constant speed running of the vehicle, thereby carrying out a correcting calculation for maintaining a forward visible distance of the vehicle to be constant (Column 4, Lines 38-65); driving means for changing a direction of the optical axis of the irradiation of the headlamp for the vehicle upon receipt of a control command sent from the irradiation

control means (Column 4, Lines 38-65); a ground reference angle of the optical axis of the irradiation (α , Fig. 1), a ground clearance of the headlamp for the vehicle (Fig. 1) and a forward visible distance of the vehicle (L, Fig. 1).

6. Regarding Claim 5, D'ORSAY provides a running state detecting means for detecting a running state of the vehicle, wherein when an acceleration in an acceleration of the vehicle is detected by the running state detecting means, the irradiation control means subtracts a correction amount which is proportional to an absolute value of the acceleration from a control amount determined by the pitch angle (C1 and C2, Column 4, Lines 29-33).

7. D'ORSAY discloses the claimed invention including a ground reference angle of the optical axis of the irradiation (α , Fig. 1), a ground clearance of the headlamp for the vehicle (Fig. 1) and a forward visible distance of the vehicle (L, Fig. 1), but does not specifically disclose wherein irradiation control means subtracts an angle obtained as an inverse tangent of a ratio from the ground reference angle and sets the value thus obtained as a correction value to compute a control amount for correcting the optical axis of the irradiation based on an amount obtained by correcting the value of the pitch angle. However, it is desirable to continuously reduce processing times and it would have been obvious to one having ordinary skill in the art at the time the invention was made to plug the D'ORSAY values or the geometrical values obtainable therefrom into another well-known mathematical function (e.g. arc tangent) for the purpose of utilizing a simpler and more efficient mathematical calculation in order to provide a shorter and more efficient process for obtaining the optimum value, thus significantly reducing

Art Unit: 2875

overall calculation times and thereby reducing response time for reflector adjustment.

Shortening the adjusting time of the headlight/reflector will increase the safety of the driver especially at high speed and further, it has been held that discovering an optimum value/function of a result effective variable involves only routine skill in the art. *In re*

Boesch, 205 USPQ 215 (CCPA 1980).

8. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over AMANO (US 6,278,912), which provides a pitch angle calculating device for controlling the optical axis of a vehicle's headlamp (Column 3, Lines 35-49) comprising:

- Vehicle posture detection means (Column 1, Lines 43-47, Column 4, Lines 8-67);
- Irradiation control means for calculating a pitch angle and computing a control amount for correcting an optical axis of irradiation and setting a ground angle of the irradiation in a deceleration to be smaller than a ground reference angle of the optical axis of the irradiation during stop or constant speed running of the behicle thereby carrying out a correcting calculation for maintaining a forward visible distance of the vehicle to be constant (Column 4, Line 47-Column 5 Line 55);
- Driving means for changing the direction of the optical axis of the headlamp upon receipt of a control command sent from the irradiation means (Column 3, Line 48-Column 4, Line 6); and
- Running state detection means (Column 2, Lines 5-9).

9. AMANO discloses the claimed invention including a ground reference angle of the optical axis of the irradiation (Θ , Fig. 8), a ground clearance of the headlamp for the vehicle (h_r) and a forward visible distance of the vehicle (w), but does not specifically disclose wherein irradiation control means subtracts an angle obtained as an inverse tangent of a ratio from the ground reference angle and sets the value thus obtained as a correction value to compute a control amount for correcting the optical axis of the irradiation based on an amount obtained by correcting the value of the pitch angle. However, it is desirable to continuously reduce processing times and it would have been obvious to one having ordinary skill in the art at the time the invention was made to plug the AMANO values or the geometrical values obtainable therefrom into another well-known mathematical function (e.g. arc tangent) for the purpose of utilizing a simpler and more efficient mathematical calculation in order to provide a shorter and more efficient process for obtaining the optimum value, thus significantly reducing overall calculation times and thereby reducing response time for reflector adjustment. Shortening the adjusting time of the headlight/reflector will increase the safety of the driver especially at high speed and further, it has been held that discovering an optimum value/function of a result effective variable involves only routine skill in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980).

Response to Arguments

8. Applicant argues that D'Orsay does not disclose or suggest an irradiation control means that "subtracts an angle obtained as an inverse tangent of a ratio " H_h/L " from the ground reference..." or a ground reference angle " α " obtained as an inverse tangent

of ratio 'Hhl/L,'" where "Hhl" is the ground clearance of the vehicle lamp and "L" is the forward visible distance of the vehicle. Notably, this is acknowledged via the new grounds for rejection above, thus rendered moot.

9. Applicant argues that the technique employed in the claimed invention can use a single sensor. Notably, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize fewer sensors and sacrifice accuracy, thus lowering manufacturing costs, since it has been held that omission of an element and its function in a combination where the remaining elements perform the same functions as before involves only routine skill in the art. *In re Karlson*, 136 USPQ 184. Furthermore, Applicant's argument is not clearly supported by the claims.

10. Given the above, the claims are found to be unpatentable over D'ORSAY.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

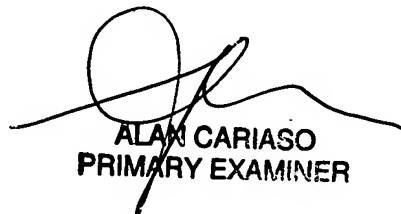
Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam C. Rehm whose telephone number is 571.272.8589. The examiner can normally be reached on M-F 9-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571.272.2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ACR
11/17/2005


ALAN CARIASO
PRIMARY EXAMINER